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IN D.O.

REPORT ON BOILERS.

No. 23983

Received at London Office 20 OCT 1949

Date of writing Report 19th OCT. 1949 When handed in at Local Office 18th OCT. 1949 Port of GREENOCK

No. in Reg. Book. Survey held at GREENOCK Date, First Survey 18th AUGUST 1948 Last Survey 23rd SEPTEMBER 1949

on the S.S. "JALAPADMA" (Number of Visits...)

Master Built at VIZAGAPATAM By whom built SCINDIA STEAMSHIP CO. LTD. Yard No. When built

Engines made at GREENOCK By whom made JOHN G. KINCAID CO. LTD. Engine No. 791 When made 1949

Boilers made at do By whom made do Boiler No. 791 When made 1949

Nominal Horse Power 524 Owners SCINDIA STEAM NAVIGATION CO. LTD. Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel COLVILLES LTD (Letter for Record...)

Total Heating Surface of Boilers 7563^{sq} three boilers Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers Three return tube single ended Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lbs Date of test 25-8-49 No. of Certificate 2546 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 63.25^{sq} No. and Description of safety valves to each boiler 2 1/4" GM. 1HL Double opening

Area of each set of valves per boiler { per Rule 6.705^{sq} as fitted 7.96^{sq} Pressure to which they are adjusted Are they fitted with casing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 14'-10 9/16" Length 11'-6" Shell plates: Material S Tensile strength 29/33 tons

Thickness 1 7/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end DR inter 4.158" Pitch of rivets { 9.8125" 28/12/49

long. seams TRDBS Diameter of rivet holes in { circ. seams 1 5/32" long. seams 1 7/16" Percentage of strength of circ. end seams { plate 64.6% rivets 44.89% Percentage of strength of circ. intermediate seam { plate 85.3% rivets 85.9% Working pressure of shell by Rules 221 lbs.

Percentage of strength of longitudinal joint { plate 85.3% rivets 85.9% combined 88.7%

Thickness of butt straps { outer 1 3/32" inner 1 7/32" No. and Description of Furnaces in each Boiler Three Morrison corrugated

Material S Tensile strength 26/30 tons Smallest outside diameter 3'-9 1/2"

Length of plain part { top bottom Thickness of plates { crown 3/4" bottom Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules

End plates in steam space: Material S Tensile strength 26/30 tons Thickness 1 1/32" Pitch of stays 21" x 18 3/4"

How are stays secured DN & loose washers Working pressure by Rules

Tube plates: Material { front S back Tensile strength { 26/30 tons Thickness { 7/8" 1 1/16"

Mean pitch of stay tubes in nests 8.43" Pitch across wide water spaces 1'-1 1/2" Working pressure { front back

Girders to combustion chamber tops: Material S Tensile strength 29/33 tons Depth and thickness of girder at centre 10" x 1 1/2" Length as per Rule 2'-9 5/8" Distance apart 8 1/4" No. and pitch of stays in each Three @ 8" Working pressure by Rules Combustion chamber plates: Material S

Tensile strength 26/30 tons Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 3/16"

Pitch of stays to ditto: Sides 8 x 8 1/4" Back 8 x 9" Top 8 x 8 1/4" Are stays fitted with nuts or riveted over Yes

Working pressure by Rules Front plate at bottom: Material S Tensile strength 26/30 tons

Thickness 7/8" Lower back plate: Material S Tensile strength 26/30 tons Thickness 7/8"

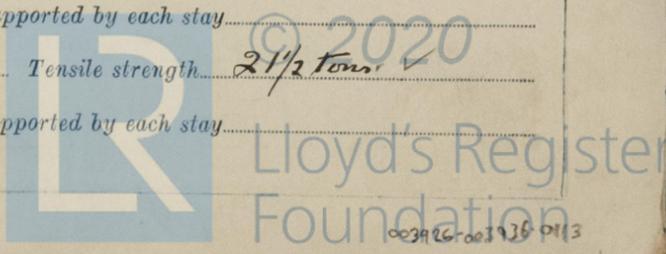
Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over Yes

Working pressure Main stays: Material S Tensile strength 28/32 tons

Diameter { At body of stay 3/4" No. of threads per inch 6 Area supported by each stay

Working pressure by Rules Screw stays: Material Woot iron Tensile strength 21 1/2 tons

Diameter { At turned off part 1 9/8" 1 3/4" No. of threads per inch 9 Area supported by each stay



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Working pressure by Rules..... Are the stays drilled at the outer ends. No Margin stays: Diameter ^{At turned off part} 1 1/2" x 2" ^{or} 1 1/2" x 2" ^{Over threads.}

No. of threads per inch 9 ✓ Area supported by each stay..... Working pressure by Rules.....

Tubes: Material Hot rolled seamless steel ✓ External diameter ^{Plain} 2 1/2" ✓ ^{Stay} 2 1/2" ✓ Thickness 9/16" ✓ 3/8" ✓ 7/16" ✓ No. of threads per inch 9 ✓

Pitch of tubes 3 1/2" x 3 5/8" ✓ Working pressure by Rules..... Manhole compensation: Size of opening in shell plate 16 1/2" x 20 1/2" ✓ Section of compensating ring 2' 8 1/2" x 3' 1" x 1 1/32" ✓ No. of rivets and diameter of rivet holes 42 @ 1 5/32" ✓

Outer row rivet pitch at ends 10" ✓ Depth of flange if manhole flanged M. Neil type door ✓ Steam Dome: Material.....

Tensile strength..... Thickness of shell..... Description of longitudinal joint.....

Diameter of rivet holes..... Pitch of rivets..... Percentage of strength of joint ^{Plate}..... ^{Rivets}.....

Internal diameter..... Working pressure by Rules..... Thickness of crown..... No. and diameter of stays.....

How connected to shell..... Inner radius of crown..... Working pressure by Rules.....

of rivets in outer row in dome connection to shell..... Size of doubling plate under dome..... Diameter of rivet holes and pitch.....

Type of Superheater..... Manufacturers of ^{Tubes}..... ^{Steel forgings}..... ^{Steel castings}.....

Number of elements..... Material of tubes..... Internal diameter and thickness of tubes.....

Material of headers..... Tensile strength..... Thickness..... Can the superheater be shut off and the boiler be worked separately..... Is a safety valve fitted to every part of the superheater which can be shut off from the boiler.....

Area of each safety valve..... Are the safety valves fitted with easing gear..... Working pressure as per Rules..... Pressure to which the safety valves are adjusted..... Hydraulic test pressure: tubes..... forgings and castings..... and after assembly in place..... Are drain cocks or valves fitted to free the superheater from water where necessary.....

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with.....

The foregoing is a correct description,

J. Conway
For JOHN G. KINCAID & CO., LTD. Manufacturer.

Dates of Survey while building ^{During progress of work in shops - -}..... ^{During erection on board vessel - - -}.....

Are the approved plans of boiler and superheater forwarded herewith..... (If not state date of approval.)

Total No. of visits.....

Is this Boiler a duplicate of a previous case YES..... If so, state Vessel's name and Report No. GRK FE N° 23226

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers have been constructed under Special survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The boilers have now been shipped to Vizagapatam, to be installed in a vessel to be built at that Port.

Please see machinery report for recommendations Greenock FE N° 23983.

Survey Fee £..... When applied for..... 19.....
 Travelling Expenses (if any) £ See machinery report : : : : : When received..... 19.....

Charles W. Hunter

Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 6 MAR 1951

Committee's Minute GLASGOW

Assigned See Machy. Rpt.

See F. E. Machy. Rpt.



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Lloyd's Register Foundation

Rpt. 13.
 Date of visit.....
 No. in Reg. E.....
 Built at.....
 Owners.....
 Electrical.....
 Is vessel.....
 Have plans.....
 Heating.....
 has the gov.....
 trip switch.....
 if not comp.....
 arranged to.....
 neg.....
 test for mac.....
 of the gener.....
 near unprot.....
 injury and d.....
 contact.....
 are they in.....
 and oil.....
 material is u.....
 semi-insulatin.....
 Is the const.....
 to pilot and.....
 side of switc.....
 main.....
 file.....
 and for each.....
 Are comparin.....
 ammeters.....
 equaliser con.....